

The permit requested by Penneco Energy Solutions (Permit Number PAS2D702BALL) for the injection of hydraulic fracturing fluid waste into the Murrysville Formation in the Sedat 4A well in Plum Borough of Pennsylvania is a direct threat to public drinking water. The request must be denied to prevent contamination at the proposed site and of downstream drinking water sources for residents of Pittsburgh.

The decision about the permit regarding the Sedat 4A injection well permit is a different situation from the decision made by EPA in 2018 to approve the Sedat 3A Injection Well. The impacts of an injection well in Plum Boro are no longer speculation but EPA must consider the impacts of the existing Sedat 3A well. In July 2021 two of the five water water wells near the site were contaminated in July 2021 when the 30-year-old injection well casing failed. Residents identified water contamination in their wells, following inadequate response from DEP, which would have included a detailed engineering review and suggesting a leak detection zone.

After the structural failure of the casing in the Sedat 3A well, the Pennsylvania Department of Environmental Protection (DEP) conducted standard parameter testing of the resident's well water but failed to test parameters that typically indicate injection fluid infiltration. Permitting the Sedat 4A injection well is in direct violation of U.S. Code of Federal Regulations 40 CFR 144¹, as it prohibits substantial endangerment of human health through the Safe Drinking Water Act (SDWA) and establishes a framework for Underground Injection Control system. This framework requires consideration of a number of measures to ensure that injection will not endanger underground sources of drinking water. As there was a lack of proper water testing after the Sedat 3A failure there is therefore no evidence disproving that the casing failure led to fracking fluid waste leakage into underground sources of drinking water (USDW).

The proposed 4A well includes the same designs and safety features as Penneco's existing well on this site, 3A which already failed. If EPA approves the permit for Sedat 4A, which has a design with proven failures, it would directly violate the EPA's adherence to the SDWA. The Sedat 4A well poses an endangerment to public health due to the high potential and probable casing failure that would lead to significant contaminants in drinking water that are hazardous to human health.

Additionally, the mechanical integrity test (MIT) conducted on the Sedat 3A well June 11, 2021 following the application of new cement bond logs found a 3% loss of pressure over 30 [minutes](#). This narrowly avoided the 5% loss which would have resulted in a failure per EPA methods. As the existing Sedat 3A well narrowly passed its MIT and the same integrity methods applied to Sedat 3A are proposed for 4A we are concerned about this near failure of the June 11 2021 MIT. Penneco has already demonstrated a failure to prevent accidents and contaminations from the Sedat 3A well and permitting the 4A well with the same insufficient engineering reviews places the region's drinking water at further risk.

¹[40 CFR § 144.1d4](#). 'Section 1431 of the Safe Drinking Water Act (SDWA) authorizes the Administrator to take action to protect the health of persons when a contaminant which is present in or may enter a public water system or underground source of drinking water may present an imminent and substantial endangerment to the health of persons.'

Earthworks reports from 2019 emphasize the risk transporting and injection of waste from oil and gas extraction poses to workers, frontline and fence-line residents, and communities nearby. While the exact toxins and chemicals in oil and gas waste remain undisclosed, research has found that fracking brings TENORM to the surface. Oil and gas waste from the Marcellus is of particular concern as it has been found to be more radioactive than other shale basins. According to a U.S. EPA analysis, the average concentration of radium-226 in 74 samples of Marcellus shale wastewater was 1,700 picocuries per liter. For comparison, the limit for drinking water is 5 picocuries per liter.

Earthworks supports the request by Protect PT who works with impacted residents of Plum Borough for EPA to withdraw the permit for the Sedat 3A fracturing waste injection well to Penneco Energy Solutions. We also urge EPA to deny permit PAS2D702BALL for Sedat 4A and protect the drinking water of the hundreds of thousands of people in Allegheny County, the communities of Plum, Oakmont, Verona, Fox Chapel, Harmar, Blawnox, Aspinwall, O'Hara, Penn Hills, Millvale, Wilkinsburg, the 90 neighborhoods in the City of Pittsburgh and all those who live downstream.

The requested permit for the Sedat 4A well in Plum Borough of Pennsylvania has a high potential for design failure, would violate safe drinking water standards, threaten public health, and impact local businesses and their workers if their water is contaminated. Injection of waste from oil and gas extraction poses to workers, frontline and fence-line residents and for these reasons the Environmental Protection Agency should deny Permit Number PAS2D702BALL from Penneco Energy Solutions.